

AD-A143 586

19319A MLRS MISSILE NUMBERS 469 414 447 ROUND NUMBERS
584/AV-4 585/AV-5 5. (U) ARMY ELECTRONICS RESEARCH AND
DEVELOPMENT COMMAND WSMR NM ATM. D C KELLER MAY 84
ERADCOM/ASL-DR-1342

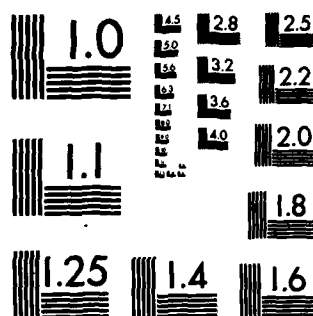
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DR-1342

May 84

AD

(12)

AD-A143 586

METEOROLOGICAL DATA REPORT

19319A MLRS

Missile Number 469, 414, 447

Round Number 584/AV-4, 585/AV-5, 586/AV-6

18 May 1984

by

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ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

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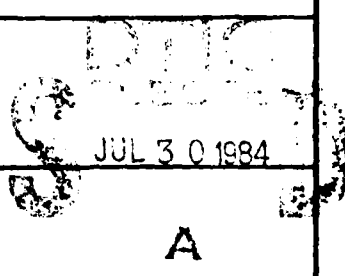
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REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER DR-1342	2. GOVT ACCESSION NO. AD-A143586	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) 19319A MLRS Missile Number 469, 414, 447 Round Number 584/AV-4, 585/AV-5, 586/AV-6		5. TYPE OF REPORT & PERIOD COVERED
7. AUTHOR(s) White Sands Meteorological Team		6. PERFORMING ORG. REPORT NUMBER
9. PERFORMING ORGANIZATION NAME AND ADDRESS		8. CONTRACT OR GRANT NUMBER(s) DA Task 1F665702D127-02
11. CONTROLLING OFFICE NAME AND ADDRESS US Army Electronics Research & Development Cmd Atmospheric Sciences Laboratory White Sands Missile Range, New Mexico 88002		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) US Army Electronics Research and Development Cmd Adelphi, MD 20783		12. REPORT DATE May 1984
		13. NUMBER OF PAGES
		15. SECURITY CLASS. (of this report) UNCLASSIFIED
		16a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report)		
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19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)		
Meteorological data gathered for the launching of the 19319A MLRS, Missile Number 469, 414, 447, Round Number 584/AV-4, 585/AV-5, 586/AV-6 are presented in tabular form.		

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A1			

INTRODUCTION

19319A MLRS, Missile Numbers 469, 414 and 447, Round Numbers 584/AV-4, 585/AV-5 and 586/AV-6, were launched from LC-33, White Sands Missile Range (WSMR), New Mexico at 1413:35, 1413:39 and 1413:44 MDT, 18 May 84. The scheduled launch times were 1400:00, 1400:03.5 and 1400:07 MDT.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico.

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature ($^{\circ}\text{C}$), relative humidity, dew point ($^{\circ}\text{C}$), density (gm/m^3), wind direction and speed, and cloud cover were made at the LC-33 Met Site at T-0 Minutes.

(2) Anemometer data were provided from existing tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

b. Upper Air

(1) Low level wind data were obtained from Pilot-balloon observations at:

SITE AND ALTITUDE

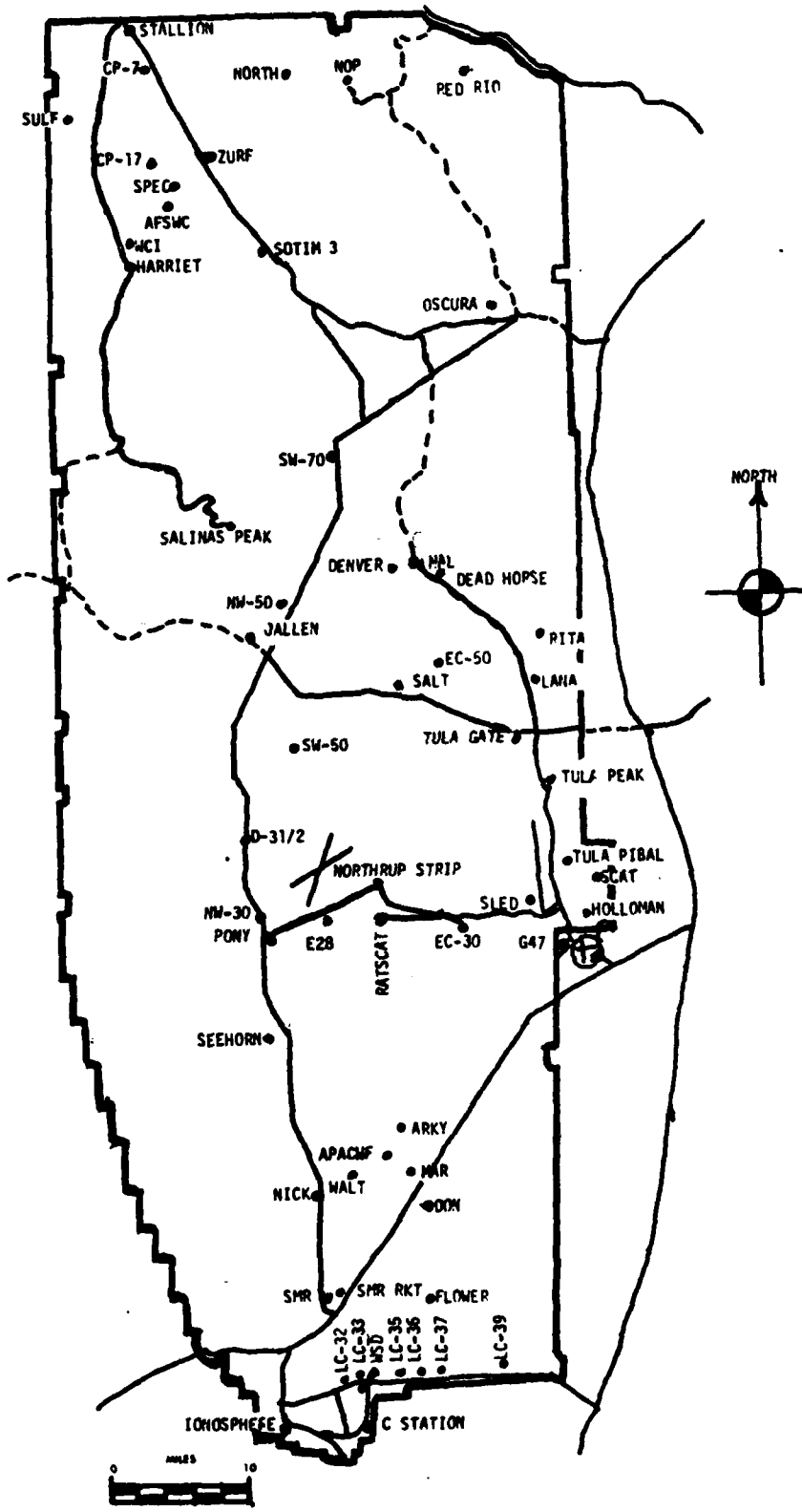
LC-33 2 km

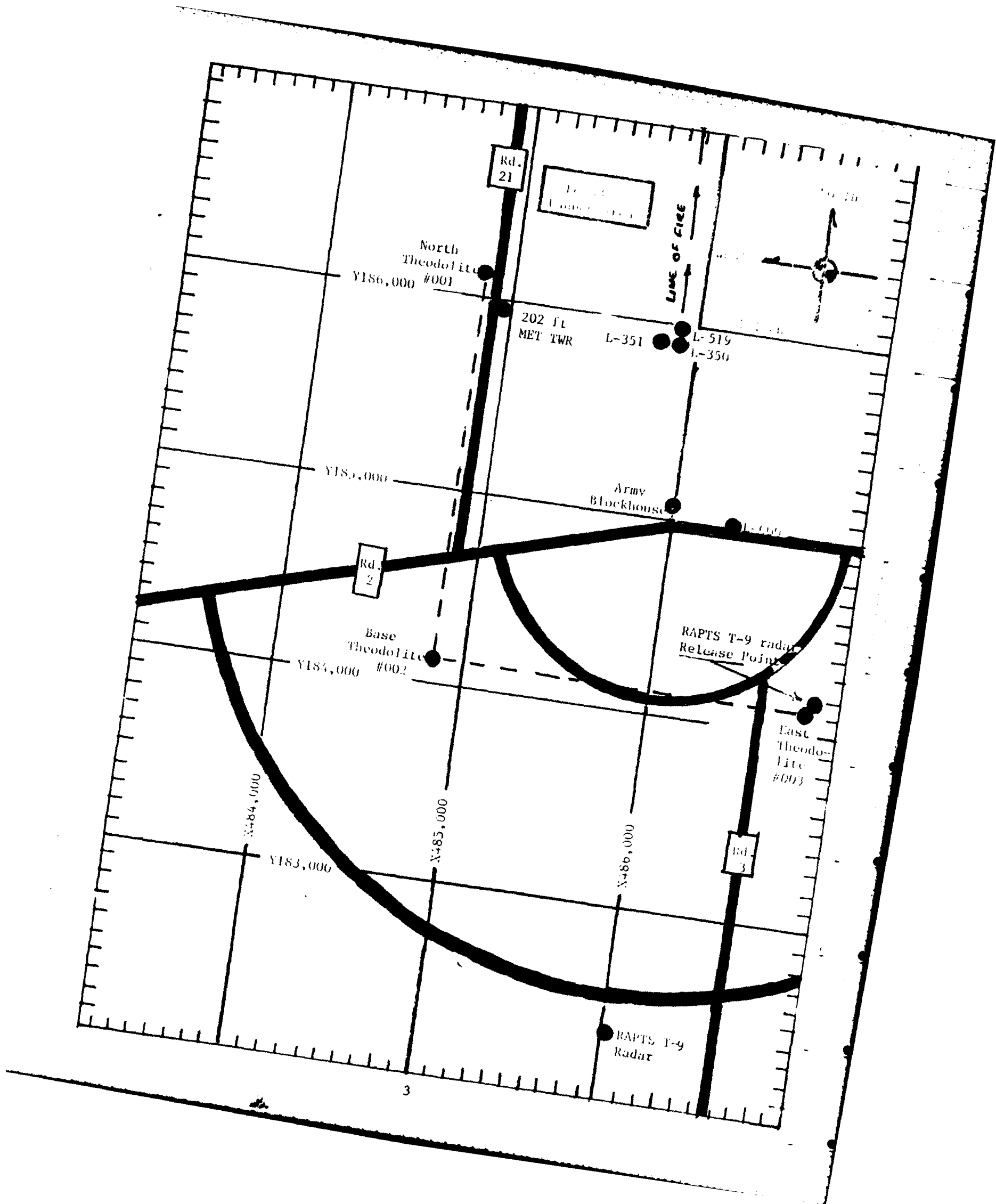
(2) Air structure data (rawinsonde) were collected at the following Met Sites.

SITE AND TIME

WSD	1230 MDT
SMR	1230 MDT
DON	1230 MDT
SMR	1315 MDT
SMR	1413 MDT
DON	1413 MDT
WSD	1512 MDT

WSMR METEOROLOGICAL SITES





PERFECT SURFACE OBSERVATION

TABLE 1

STATION <u>LC-33</u>									
DATE <u>18</u> <u>May</u> <u>84</u>		Y= <u>484.982.64</u>		Y= <u>185.957.73</u>		H= <u>3995.00</u>			
TIME	PRESSURE mb	TEMPERATURE °C	DEW POINT °C	RELATIVE HUMIDITY %	DENSITY gm/m ³	DIRECTION degs	SPEED kts	CHARACTER kts	VISIBIL- ITY
<u>1413</u>	<u>8804</u>	<u>28.5</u>	<u>11.7</u>	<u>36</u>		<u>320</u>	<u>04</u>		<u>50</u>

OBSTRUCTIONS TO VISIBILITY	CLOUDS								REMARKS	
	1st LAYER			2nd LAYER			3rd LAYER			
	AMT	TYPE	HGT	AMT	TYPE	HGT	AMT	TYPE		HGT
	5	CB	7000							V CB E MOUC SW

PSYCHROMETRIC COMPUTATION

TIME: MDT	<u>1413</u>	
DRY BULB TEMP.	<u>28.5</u>	
WET BULB TEMP.	<u>17.5</u>	
WET BULB DEPR.	<u>11.0</u>	
DEW POINT	<u>11.7</u>	
RELATIVE HUMID.	<u>36</u>	

LC-33 METEOROLOGICAL TOWER
ANEMOMETER MEASURED WIND DATA

WSTM COORDINATES X=484,982.64 Y=185,957.73 H=3983.00(BASE)

TABLE NO. 2

DATE 18 May 1984 1413:35 M D T
DAY MONTH YEAR TIME

LEVEL #1 12 FT AGL			LEVEL #2 62 FT AGL		
T-TIME (SEC)	DIR (DEG)	SPEED (KTS)	T-TIME (SEC)	DIR (DEG)	SPEED (KTS)
T-30	323	12	T-30	288	12
T-20	285	11	T-20	326	15
T-10	313	19	T-10	310	20
T- 0 (1st T)	318	14	T- 0 (1st T)	314	20
T+10	315	13	T+10	308	19
T+20	325	14	T+20	303	13
T+30	322	12	T+30	307	13
T+40			T+40		
T+50			T+50		
T+60			T+60		

LEVEL #3 102 FT AGL			LEVEL #4 202 FT AGL		
T-TIME (SEC)	DIR (DEG)	SPEED (KTS)	T-TIME (SEC)	DIR (DEG)	SPEED (KTS)
T-30	320	12	T-30	305	21
T-20	320	20	T-20	297	22
T-10	307	24	T-10	294	19
T- 0 (1st T)	312	20	T- 0 (1st T)	300	20
T+10	301	20	T+10	303	19
T+20	296	17	T+20	311	18
T+30	315	15	T+30	304	13
T+40			T+40		
T+50			T+50		
T+60			T+60		

TABLE 3

PILOT-BALLOON MEASURED WIND DATA

DATE 18 May 1984

SITE: LC-33
 TIME: 1315 MDT
 WSTM COORDINATES:
 X= 486,037.24
 Y= 182,350.16
 H= 3,977.30

SITE: LC-33
 TIME: 1345 MDT
 WSTM COORDINATES:
 X= 486,037.24
 Y= 182,350.16
 H= 3,977.30

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	160	06
150	136	03
210	133	09
270	147	09
330	147	04
390	167	06
500	115	06
650	059	07
800	050	07
950	350	04
1150	016	04
1350	338	07
1550	308	07
1750	315	07
2000	288	07

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE		CALM
150	158	01
210	152	06
270	094	07
330	184	02
390	345	03
500	205	02
650	274	04
800	262	05
950	245	08
1150	240	06
1350	235	03
1550	210	09
1750	240	06
2000	249	11

All data obtained from RAPTS T-9 radar Tracked pilot-balloon observations.

TABLE 3 Con't

T-TIME PILOT-BALLOON MEASURED WIND DATA

DATE 18 May 1984

SITE: LC-33
TIME: 1414 MDT
WSTM COORDINATES:
X= 486,037.24
Y= 182,350.16
H= 3,977.30

SITE:
TIME
WSTM COORDINATES:
X=
Y=
H=

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	320	04
150	266	02
210	290	09
270	287	05
330	255	06
390	260	10
500	261	10
650	247	12
800	261	11
950	264	07
1150	MISG	
1350	273	11
1550	273	08
1750	242	08
2000	251	08

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE		
150		
210		
270		
330		
390		
500		
650		
800		
950		
1150		
1350		
1550		
1750		
2000		

TABLE 4

AIMING AND T-TIME COMPUTER MET MESSAGES

18 May 1984

WSD 1230 MDT	SMR 1230 MDT	DON 1230 MDT	SMR 1315 MDT
METCM1324064	METCM1325064	METCM1326063	METCM1325064
181850122881	181850122881	181850122879	181930122880
00160005 30140881	00089004 30200881	00604007 30150879	00000000 30360880
01015007 29890871	01147007 29840871	01071019 29920869	01343002 29900870
02570004 29610846	02249006 29600846	02638008 29630845	02460005 29620846
03586010 29210808	03123003 29190808	03028008 29160806	03511006 29250807
04553008 28720762	04608004 28710762	04529009 28680760	04507013 28800761
05550018 28300718	05522014 28270717	05530016 28300716	05486013 28330717
06505017 27970675	06497021 27980675	06512017 27910674	06504016 27870675
07489020 27600635	07481022 27580635	07486019 27500634	07497023 27510635
08470018 27200597	08474020 27040597	08478019 27100595	08510023 27220596
09549020 26940561	09532021 26860560	09535022 26820559	09557020 26960560
10551020 26610526	10555019 26550526	10546019 26560524	
11568015 26210493	11554021 26180493	11556017 26200492	
12558019 25730447	12561020 25730446	12554020 25750446	
SMR 1413 MDT	DON 1413 MDT	WSD 1512 MDT	
METCM1325064	METCM1326063	METCM1324064	
182020122880	182020122878	182120122879	
00427008 30410880	00213010 30260878	00516010 30410879	
01571015 30190870	01341002 30070868	01465008 30270869	
02499011 29780845	02348009 29770844	02451011 29840844	
03497010 29400807	03361004 29380806	03469010 29450806	
04552009 28920762	04439007 28890760	04463009 28990761	
05555011 28420718	05463015 28410716	05491010 28500717	
06530012 27960675	06488017 27900674	06512008 27990675	
07502013 27510635	07481024 27530634	07479028 27520635	
08480020 27110597	08496023 27200595	08516019 27120596	
09528025 26790560	09548022 26880559	09531023 26790560	
10552021 26650526	10561024 26450525	10546024 26470525	
11580019 26300493	11560023 26170492	11567022 26200492	
12569016 25740447	12563017 25770445	12566016 25760446	

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

SIGNIFICANT LEVEL DATA

1790020285
WHITE SANDS

TABLE 5

STATION ALTITUDE 3909.70 FEET MSL
18 MAY 84
ASCENSION NO. 285 1230 MDT

PRESSURE MILLIBARS	GLONOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
981.0	3989.0	27.0	8.9	32.0
875.9	4156.8	24.9	5.7	29.0
850.0	5016.7	22.0	6.7	37.0
796.6	6849.4	16.4	5.7	49.0
746.4	8654.0	11.1	4.3	63.0
722.6	9540.7	9.1	1.0	57.0
713.7	9876.0	8.7	-5.5	36.0
700.0	10404.2	8.0	-6.1	36.0
640.3	12799.8	3.0	-9.3	40.0
603.3	14373.1	-1.2	-9.1	55.0
572.6	15736.9	-3.4	-23.7	19.0
549.4	16810.1	-4.3	-25.0	18.0
500.0	19222.7	-10.5	-30.2	18.0
427.1	23153.9	-18.1	-37.1	17.0
400.0	24755.0	-21.4	-40.4	16.0
367.1	26816.0	-26.7	-43.8	18.0

STATION ALTITUDE 3989.00 FEET MSL
 18 MAY 84 1230 MDT
 ASCENSION NO. 285

UPPER AIR DATA
 1790020285
 WHITE SANDS

GEODETIC COORDINATES
 32.60043 LAT DEG
 106.37033 LON DEG

TABLE 6

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
3989.0	881.0	27.0	8.9	32.0	1017.5	676.6	90.0	5.1	1.000275
4000.0	880.7	26.9	8.7	31.8	1017.7	676.4	89.7	5.0	1.000274
4500.0	865.5	23.7	6.2	32.2	1011.3	672.7	64.0	3.2	1.000266
5000.0	850.5	22.1	6.6	36.8	999.3	670.8	14.1	2.8	1.000265
5500.0	835.6	20.5	6.5	40.2	986.8	669.1	340.3	4.4	1.000263
6000.0	820.9	19.0	6.3	43.4	974.6	667.3	326.4	5.6	1.000260
6500.0	806.5	17.5	6.0	46.7	962.5	665.6	320.9	8.5	1.000256
7000.0	792.3	16.0	5.6	50.2	950.5	663.9	321.7	8.4	1.000253
7500.0	778.1	14.5	5.3	54.0	938.3	662.2	322.3	8.5	1.000250
8000.0	764.2	13.0	4.9	57.9	926.3	660.5	316.3	9.7	1.000247
8500.0	750.6	11.6	4.5	61.8	914.5	658.7	311.7	10.9	1.000243
9000.0	737.0	10.3	3.1	60.7	902.2	657.2	308.3	12.7	1.000237
9500.0	723.7	9.2	1.2	57.3	889.8	655.8	305.8	14.6	1.000230
10000.0	710.5	8.5	-5.7	36.0	876.8	654.5	303.9	16.6	1.000214
10500.0	697.5	7.8	-6.3	36.2	861.1	653.7	298.2	17.3	1.000211
11000.0	684.7	6.8	-6.9	37.0	850.4	652.4	292.6	18.2	1.000207
11500.0	672.0	5.7	-7.5	37.8	837.9	651.2	287.5	19.1	1.000204
12000.0	659.6	4.7	-8.2	38.7	825.6	650.0	282.4	19.2	1.000200
12500.0	647.5	3.6	-8.8	39.5	813.5	648.7	277.3	19.6	1.000197
13000.0	635.5	2.5	-9.1	41.9	801.7	647.4	272.7	19.3	1.000194
13500.0	623.6	1.1	-9.0	46.7	790.5	645.8	268.5	19.0	1.000192
14000.0	611.9	-2.2	-9.0	51.4	779.5	644.2	266.7	18.8	1.000189
14500.0	600.4	-1.4	-10.0	51.7	768.3	642.8	269.1	18.6	1.000186
15000.0	589.0	-2.2	-14.4	38.5	756.3	641.7	273.1	18.3	1.000179
15500.0	577.8	-3.0	-20.1	25.3	744.6	640.6	286.2	18.3	1.000172
16000.0	566.8	-3.6	-24.0	18.8	732.2	639.8	298.6	19.3	1.000168
16500.0	556.0	-4.0	-24.6	18.3	719.3	639.3	305.0	19.4	1.000165
17000.0	545.3	-4.8	-25.4	18.0	707.5	638.4	310.8	19.7	1.000162
17500.0	534.8	-6.1	-26.5	18.0	697.2	636.8	312.2	19.2	1.000159
18000.0	524.5	-7.4	-27.5	18.0	687.1	635.3	312.1	18.4	1.000156
18500.0	514.3	-8.6	-28.6	18.0	677.1	633.7	313.4	17.6	1.000154
19000.0	504.4	-9.9	-29.7	18.0	667.3	632.2	315.9	16.8	1.000151
19500.0	494.5	-11.0	-30.6	17.9	656.9	630.8	318.6	16.1	1.000149
20000.0	484.7	-12.0	-31.5	17.8	646.3	629.7	320.6	16.3	1.000146
20500.0	475.0	-13.0	-32.4	17.7	635.9	628.5	322.5	16.5	1.000144
21000.0	465.6	-13.9	-33.3	17.5	625.6	627.3	321.9	17.2	1.000141
21500.0	456.4	-14.9	-34.2	17.4	615.5	626.1	318.3	18.5	1.000139
22000.0	447.3	-15.9	-35.0	17.3	605.5	625.0	315.2	19.9	1.000137
22500.0	438.4	-16.8	-35.9	17.2	595.8	623.8	311.9	19.5	1.000134
23000.0	429.7	-17.6	-36.8	17.0	586.2	622.6	308.4	19.2	1.000132

STATION ALTITUDE 39°9.00 FEET MSL
 10 MAY 84
 ASCENSION NO. 285
 1230 MDT
 UPPFR AIR DATA
 1790020285
 WHITE SANDS
 TABLE 6 Con't
 GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	FEET	DIRECTION DEGREES(TN)	SPEED KNOTS	
23500.0	421.1	-18.8	-37.8	16.8	576.6	621.4		308.6	18.9	1.000130
24000.0	412.6	-19.8	-38.8	16.5	567.3	620.1		311.9	18.8	1.000128
24500.0	404.2	-20.9	-39.9	16.2	558.1	618.8				1.000125
25000.0	395.9	-22.0	-40.8	16.2	549.2	617.4				1.000123
25500.0	387.8	-23.3	-41.6	16.7	540.6	615.8				1.000121
26000.0	379.8	-24.6	-42.4	17.2	532.2	614.2				1.000119
26500.0	372.0	-25.9	-43.2	17.7	524.0	612.6				1.000118

STATION ALTITUDE 3939.00 FEET MSL
 18 MAY 84 1230 MDT
 ASCENSION NO. 285

MANDATORY LEVELS
 1390020285
 WHITE SANDS

GEODETTIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

TABLE 7

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CFNTIGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS	
850.0	5013.	22.0	6.7	37.	32.7	2.9	
800.0	6725.	16.8	5.8	48.	321.3	8.5	
750.0	8514.	11.5	4.5	62.	311.5	11.0	
700.0	10396.	8.0	-6.1	36.	299.4	17.2	
650.0	12385.	3.8	-8.7	39.	278.3	19.3	
600.0	14500.	-1.4	-10.2	51.	269.1	18.6	
550.0	16760.	-4.3	-25.0	18.	308.2	19.5	
500.0	19195.	-10.5	-30.2	18.	317.0	16.5	
450.0	21830.	-15.6	-34.8	17.	316.1	19.5	
400.0	24713.	-21.4	-40.4	16.			

STATION ALTITUDE 3997.10 FEET MSL
18 MAY 84
ASCENSION NO. 52 1230 MDT

SIGNIFICANT LEVEL DATA
1790060352
S W P

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

TABLE 8

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT
	AIR DEGREES	DEWPOINT CENTIGRADE	
81.0	3997.3	27.2	10.8
876.4	4148.4	24.3	-2.3
866.6	4470.8	23.4	8.7
850.0	5023.7	21.8	8.0
771.5	7747.3	13.6	4.7
700.0	10409.4	6.7	2.2
684.5	11010.0	6.5	-8.2
571.6	11526.9	6.3	-8.0
614.2	13905.8	-4	-9.8
591.2	14901.8	-4.7	-11.3
573.3	15698.0	-4.4	-17.9
559.6	16324.3	-4.5	-25.2
543.9	17059.5	-5.5	-25.4
500.0	19207.7	-11.0	-29.0
460.7	21263.5	-14.1	-32.6
400.0	24737.9	-21.9	-39.7
			36.0
			17.0
			39.0
			41.0
			55.0
			73.0
			34.0
			35.0
			49.0
			60.0
			34.0
			18.0
			19.0
			21.0
			19.0
			18.0

STATION ALTITUDE 5997.70 FEET MSL
 13 MAY 84
 ASCENSION NO. 52

UPPER AIR DATA
 1390060052
 S M R

GEODETIC COORDINATES
 32.48036 LAT DEG
 106.42307 LPN DEG

TABLE 9

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
3997.3	681.0	27.2	36.0	1016.1	677.1	50.0	4.1	1.000281
4000.0	680.9	27.1	35.7	1016.3	677.0	50.0	4.1	1.000280
4500.0	665.7	23.3	39.1	1012.3	672.4	57.0	3.8	1.000274
5000.0	650.7	21.4	40.9	999.7	670.7	64.9	3.6	1.000270
5500.0	635.7	20.4	43.4	987.2	669.0	73.5	3.5	1.000266
6000.0	621.0	18.9	46.0	974.9	667.3	82.7	3.4	1.000262
6500.0	606.5	17.4	48.6	962.8	665.5	74.3	2.8	1.000258
7000.0	792.3	15.8	51.2	950.8	663.7	60.1	2.2	1.000254
7500.0	778.3	14.3	53.7	939.1	662.0	359.9	2.6	1.000250
8000.0	764.4	12.9	56.7	926.9	660.3	323.2	4.1	1.000246
8500.0	750.6	11.6	60.1	914.3	658.8	309.3	6.4	1.000242
9000.0	737.0	10.4	63.5	901.9	657.3	299.8	9.3	1.000239
9500.0	723.6	9.1	66.9	889.7	655.8	294.3	12.5	1.000235
10000.0	710.5	7.8	70.2	877.7	654.2	290.5	15.2	1.000231
10500.0	697.7	6.7	73.1	865.5	652.8	286.7	16.9	1.000225
11000.0	684.9	6.5	76.0	851.5	652.1	283.7	18.6	1.000220
11500.0	672.3	6.3	78.9	836.5	651.9	279.3	19.6	1.000213
12000.0	659.8	5.0	82.2	824.9	650.3	275.1	20.6	1.000207
12500.0	647.5	3.6	85.6	813.6	648.7	272.4	21.3	1.000197
13000.0	635.5	2.2	88.9	802.6	647.0	270.9	21.6	1.000194
13500.0	623.6	.7	91.8	791.8	645.3	269.4	21.9	1.000192
14000.0	612.0	-0.8	94.6	781.4	643.5	271.0	21.5	1.000189
14500.0	600.4	-3.0	97.2	772.8	640.9	273.5	21.0	1.000186
15000.0	589.0	-4.7	99.6	763.0	638.8	276.1	20.5	1.000183
15500.0	577.7	-6.5	101.9	748.2	638.9	283.3	19.9	1.000176
16000.0	566.7	-8.4	103.9	734.1	638.8	290.6	19.7	1.000170
16500.0	555.8	-10.2	105.2	721.0	638.4	297.2	19.5	1.000165
17000.0	545.2	-12.0	106.9	709.0	637.6	302.9	19.4	1.000162
17500.0	534.6	-13.8	108.4	698.4	636.2	308.6	19.4	1.000159
18000.0	524.2	-15.6	109.9	688.2	634.6	310.5	19.5	1.000157
18500.0	514.1	-17.4	111.2	678.1	633.1	312.0	19.7	1.000154
19000.0	504.1	-19.2	112.5	668.2	631.5	313.3	19.9	1.000152
19500.0	494.2	-21.0	113.7	657.6	630.4	314.1	20.3	1.000149
20000.0	484.5	-22.8	114.9	646.5	629.4	314.8	20.7	1.000147
20500.0	474.9	-24.6	116.1	635.6	628.5	315.2	20.8	1.000144
21000.0	465.6	-26.4	117.3	624.9	627.6	315.0	20.4	1.000141
21500.0	456.3	-28.2	118.5	614.7	626.5	314.9	20.1	1.000139
22000.0	447.1	-30.0	119.7	605.0	625.1	605.0	20.0	1.000137
22500.0	438.1	-31.8	120.9	595.4	623.7	595.4	19.9	1.000134
23000.0	429.3	-33.6	122.1	586.0	622.4	586.0	19.8	1.000132

STATION ALTITUDE 3997.30 FEET MSL
 12 MAY 84 1230 MDT
 ASCENSION NO. 5

UPPER AIR DATA
 1390060052
 S M R

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

TABLE 9 Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE					DIRECTION DEGREES(TN)	SPEED KNOTS	
23500.0	420.7	-19.1	-37.2	18.4	576.7	621.0				1.000130
24000.0	412.2	-20.2	-36.2	18.2	567.6	619.6				1.000128
24500.0	403.9	-21.4	-39.2	18.1	559.7	618.2				1.000126

STATION ALTITUDE 1097.71 FEET MSL
 16 MAY 84 1230 MDT
 ASCENSION NO. 52

MANDATORY LEVELS
 1390660052
 S W R

TABLE 10

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT		DIRECTION DEGREES(TN)	SPEED KNOTS
857.0	5020.	21.8	8.0	41.	65.2	3.6
800.0	6731.	16.7	6.1	50.	60.4	2.4
750.0	8520.	11.6	4.2	60.	309.9	6.5
700.0	10399.	6.7	2.2	73.	287.4	16.6
650.0	12391.	3.8	-8.4	40.	272.7	21.2
600.0	14501.	-3.0	-10.6	56.	273.5	20.9
550.0	16750.	-5.1	-25.3	19.	300.2	19.4
500.0	19181.	-11.0	-29.0	21.	313.6	20.1
450.0	21815.	-15.4	-33.8	19.		
400.0	24697.	-21.9	-39.7	18.		

GEODETIC COORDINATES
 32.46034 LAT DEG
 106.62307 LON DEG

GEODETIC COORDINATES
32.57209 LAT DEG
106.29439 LON DEG

SIGNIFICANT LEVEL DATA
190200005
DOM

TABLE 11

STATION ALTITUDE 4033.69 FEET MSL
18 MAY 84
ASCENSION NO. 5 1230 MDT

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT
	AIR DEGREES	DEWPOINT CENTIGRADE	
679.4	26.9	14.3	46.0
859.2	24.5	4.3	27.0
1350.0	22.6	5.5	33.0
788.4	15.0	3.8	47.0
759.4	12.4	3.6	55.0
721.0	9.6	-5.1	35.0
700.0	7.9	-3.3	45.0
693.0	7.0	-3.2	48.0
671.5	5.2	-10.5	31.0
564.4	-3.9	-10.3	61.0
567.0	-4.7	-24.7	19.0
533.4	-6.6	-26.9	18.0
503.0	-10.6	-29.7	19.0
484.3	-11.8	-31.8	17.0
469.5	-13.2	-33.0	17.0
429.9	-17.4	-36.5	17.0
414.9	-19.2	-38.6	16.0
400.0	-22.0	-39.8	18.0

STATION ALTITUDE 4003.69 FEET MSL
 16 MAY 84
 ASCENSION NO. 5 1230 MDT

UPPER AIR DATA
 1390200005
 NON

GEODETIC COORDINATES
 32.57209 LAT DEG
 106.29439 LON DEG

TABLE 12

GLOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
4003.7	879.4	26.9	46.0	1013.8	677.2	340.0	7.0	1.000295
4500.0	864.4	24.0	28.5	1009.5	672.8	343.0	6.8	1.000262
5000.0	849.4	22.5	33.1	996.7	671.2	346.1	5.6	1.000261
5500.0	834.5	20.7	36.4	985.2	669.2	349.4	6.5	1.000259
6000.0	819.8	18.9	39.7	973.9	667.2	352.9	6.3	1.000256
6500.0	805.4	17.2	43.0	962.7	665.1	356.5	6.2	1.000252
7000.0	791.3	15.4	46.3	951.7	663.0	353.7	6.1	1.000249
7500.0	777.2	14.0	50.1	939.1	661.5	325.6	6.6	1.000246
8000.0	763.3	12.8	53.9	926.4	660.0	305.7	8.4	1.000243
8500.0	749.5	11.7	49.9	913.5	658.6	297.8	10.9	1.000236
9000.0	736.0	10.7	42.9	900.7	657.3	294.3	13.5	1.000227
9500.0	722.7	9.7	35.9	888.0	656.0	293.2	15.4	1.000218
10000.0	709.5	8.7	40.4	874.9	654.8	295.2	15.4	1.000217
10500.0	696.6	7.5	46.5	862.5	653.5	296.7	15.6	1.000215
11000.0	683.8	6.2	40.8	850.9	651.9	291.3	16.4	1.000208
11500.0	671.2	5.2	31.1	838.8	650.4	286.5	17.4	1.000200
12000.0	658.6	3.9	35.2	826.7	649.0	281.9	17.9	1.000198
12500.0	646.3	2.7	39.3	814.8	647.6	277.6	18.6	1.000196
13000.0	634.1	1.4	43.4	803.1	646.1	274.1	19.0	1.000194
13500.0	622.2	.2	47.5	791.6	644.7	271.5	19.0	1.000191
14000.0	610.6	-1.0	51.5	780.2	643.2	269.0	19.0	1.000189
14500.0	599.1	-2.3	55.6	769.1	641.8	273.2	19.9	1.000186
15000.0	587.9	-3.5	59.7	758.1	640.3	279.0	18.9	1.000184
15500.0	576.7	-4.3	42.6	746.2	639.2	286.0	19.0	1.000176
16000.0	565.7	-4.8	19.0	733.9	638.4	293.9	19.5	1.000168
16500.0	554.8	-5.4	18.6	721.4	637.7	300.9	20.3	1.000165
17000.0	544.1	-6.0	18.3	709.2	636.9	303.0	20.2	1.000162
17500.0	533.7	-6.6	18.0	697.1	636.2	305.2	20.1	1.000159
18000.0	523.3	-7.8	18.3	686.7	634.8	307.0	19.6	1.000156
18500.0	513.2	-9.0	18.6	676.5	633.3	308.6	18.7	1.000154
19000.0	503.2	-10.2	18.9	666.4	631.8	310.4	18.0	1.000151
19500.0	493.4	-11.1	18.2	655.6	630.8	312.3	17.7	1.000149
20000.0	483.7	-11.9	17.0	644.6	629.8	314.3	17.5	1.000146
20500.0	474.1	-12.7	17.0	634.0	628.8	314.0	17.6	1.000143
21000.0	464.8	-13.6	17.0	623.6	627.7	313.5	17.8	1.000141
21500.0	455.5	-14.6	17.0	613.5	626.5	312.2	18.4	1.000139
22000.0	446.4	-15.6	17.0	603.6	625.3	310.5	19.4	1.000136
22500.0	437.5	-16.5	16.9	593.8	624.1	310.7	20.1	1.000134
23000.0	428.8	-17.5	16.9	584.3	622.9	312.5	20.7	1.000132
23500.0	420.2	-18.6	16.4	574.8	621.7			1.000129

STATION ALTITUDE 4033.69 FEET MSL
 16 MAY 84 1230 MDT
 ASCENSION NO. 5

UPPER AIR DATA
 1790200005
 DON

GEOGETIC COORDINATES
 32.57209 LAT DEG
 106.29439 LON DEG

TABLE 12 Con't

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
24000.0	411.7	-19.8	16.4	566.0	620.2			1.000127
24500.0	403.3	-21.4	17.6	557.9	618.2			1.000125

STATION ALTITUDE 4003.69 FEET MSL
 18 MAY 84 1230 MDT
 ASCENSION NO. 5

MANDATORY LEVELS

1190200005

DOM

TABLE 13

GEODETIC COORDINATES
 32.57209 LAT DEG
 106.29459 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE	PERCENT		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4977.	22.6	5.5	33.		345.0	6.6
800.0	6689.	16.5	4.3	44.		357.9	6.2
750.0	8476.	11.7	1.7	50.		298.0	10.8
700.0	10357.	7.9	-3.3	45.		296.6	15.5
650.0	12345.	3.1	-9.8	38.		275.9	18.4
600.0	14453.	-2.2	-9.0	55.		272.8	18.9
550.0	16704.	-5.6	-25.8	19.		301.9	20.2
500.0	19156.	-10.6	-29.7	19.		311.0	17.9
450.0	21775.	-15.2	-34.6	17.		311.2	19.0
400.0	24659.	-22.0	-39.8	18.			

STATION ALTITUDE 3997.30 FEET MSL
18 MAY 84 1215 MDT
ASCENSION NO. 51

SIGNIFICANT LEVEL DATA

1790060953

S M R

TABLE 14

PRESSURE		TEMPERATURE		REL. HUM. PERCENT
GLOMETRIC ALTITUDE MSL FEET	ALTITUDE MILLIBARS	AIR DEGREES	DEWPOINT CENTIGRADE	
860.2	3997.3	28.7	10.8	33.0
378.3	4060.0	25.5	5.1	27.0
350.0	4999.2	22.2	4.7	32.0
770.8	7753.5	14.7	3.2	46.0
724.9	9446.0	9.8	2.6	61.0
700.0	10397.2	7.4	.6	62.0
682.4	11084.7	5.7	-5.9	43.0
657.0	12100.2	3.2	-9.7	38.0
637.2	12913.5	2.0	-16.9	23.0
612.3	13965.7	-6	-11.3	44.0
596.1	14658.9	-1.5	-24.0	16.0
582.2	15286.7	-1.2	-23.7	16.0
527.2	17856.2	-7.6	-27.7	18.0

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

STATION ALTITUDE 3097.30 FEET MSL
18 MAY 84 1315 MDT
ASCENSION NO. 53

UPPER AIR DATA
1190060053
5 M R

GEODETIC COORDINATES
32.46034 LAT DEG
106.42307 LON DEG

TABLE 15

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	WIND DATA		INDEX OF REFRACTION
						SPEED KNOTS	DIRECTION DEGREES(TN)	
3997.3	880.2	28.7	10.8	33.0	1010.2	678.7	-0	1.000279
4000.0	880.1	28.6	10.6	32.7	1010.6	678.6	287.7	1.000279
4500.0	864.9	24.0	5.0	29.3	1010.3	672.8	287.7	1.000263
5000.0	850.0	22.2	4.7	32.0	998.7	670.8	287.7	1.000260
5500.0	835.0	20.6	4.6	34.5	985.7	669.3	287.7	1.000257
6000.0	820.3	19.5	4.4	37.1	972.8	667.7	287.7	1.000254
6500.0	805.9	18.1	4.2	39.6	960.2	666.2	286.8	1.000251
7000.0	791.7	16.8	3.8	42.2	947.7	664.6	280.0	1.000247
7500.0	777.8	15.4	3.4	44.7	935.5	663.0	275.5	1.000244
8000.0	763.9	14.0	3.2	48.2	923.3	661.4	275.8	1.000241
8500.0	750.2	12.5	3.1	52.6	911.3	659.8	277.4	1.000239
9000.0	736.7	11.1	2.9	57.0	899.4	658.1	279.4	1.000236
9500.0	723.5	9.7	2.5	61.1	887.7	656.4	282.2	1.000233
10000.0	710.3	8.4	1.5	61.6	875.7	654.9	284.5	1.000228
10500.0	697.3	7.1	-0.3	59.2	863.9	653.3	284.5	1.000221
11000.0	684.5	5.9	-5.0	45.3	852.6	651.6	283.5	1.000210
11500.0	671.9	4.7	-7.4	41.0	840.8	650.0	282.5	1.000204
12000.0	659.5	3.4	-9.3	38.5	829.1	648.5	282.3	1.000200
12500.0	647.2	2.6	-12.9	30.6	816.5	647.4	282.1	1.000193
13000.0	635.1	1.8	-16.2	24.7	803.9	646.3	280.3	1.000188
13500.0	623.2	.6	-13.2	34.7	792.1	644.9	277.9	1.000188
14000.0	611.5	-0.6	-11.7	42.6	780.5	643.6	279.8	1.000187
14500.0	600.0	-1.3	-19.8	22.7	768.2	642.6	286.5	1.000178
15000.0	588.6	-1.3	-23.9	16.0	756.0	642.5	293.9	1.000172
15500.0	577.4	-1.7	-24.1	16.2	740.7	642.0	303.6	1.000169
16000.0	566.4	-3.0	-24.8	16.6	729.9	640.5	313.8	1.000167
16500.0	555.5	-4.2	-25.6	16.9	719.3	639.0	20.3	1.000164
17000.0	544.9	-5.5	-26.4	17.3	708.8	637.5	20.1	1.000162
17500.0	534.5	-6.7	-27.2	17.7	698.5	636.1		1.000159

STATION ALTITUDE 3947.30 FEET MSL
 18 MAY 84 1315 MDT
 ASCENSION NO. 53

MANDATORY LEVELS
 1790060053
 S M R
 TABLE 16

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT	PERCENT	DIRECTION DEGREES(TW)	SPEED KNOTS	
850.0	4996.	22.2	4.7	32.	287.7	2.7	
800.0	6709.	17.8	4.1	41.	283.5	7.4	
750.0	8504.	12.5	3.1	53.	277.4	12.3	
700.0	10367.	7.4	.6	62.	284.8	16.7	
650.0	12372.	2.8	-12.0	33.	282.2	19.4	
600.0	14481.	-1.3	-19.8	23.	286.4	21.4	
550.0	16746.	-4.9	-26.0	17.			

STATION ALTITUDE 3997.30 FEET MSL
16 MAY 84
ASCENSION NO. 54 1413 MDT

SIGNIFICANT LEVEL DATA
11970040754
S M P

GEODETIC COORDINATES
32.46034 LAT DEG
106.42307 LON DEG

TABLE 17

PRESSURE GEOMETRIC		TEMPERATURE		REL. HUM. PERCENT.
MILLIBARS	ALTITUDE MSL FEET	AIR DEGREES	DEWPOINT CENTIGRADE	
979.8	3997.3	29.8	5.8	22.0
955.0	4826.3	24.7	.3	20.0
950.0	4994.6	24.2	-.2	20.0
808.2	6431.3	20.3	-2.1	22.0
739.4	8917.7	12.9	-3.8	31.0
700.0	10416.3	8.2	-3.9	42.0
690.9	10771.0	7.7	-8.8	30.0
673.4	11463.0	5.5	-9.5	33.0
670.5	11578.9	5.3	-4.0	51.0
653.7	12258.4	3.3	-3.9	59.0
652.0	12327.8	3.1	-7.7	45.0
635.7	13020.2	1.4	-11.0	39.0
627.2	13356.0	.4	-6.9	58.0
624.6	13465.6	.3	-10.2	45.0
609.4	14113.7	-.9	-15.1	33.0
589.4	14985.6	-3.3	-14.3	42.0
565.6	16053.3	-5.4	-27.2	16.0
548.8	16830.7	-5.7	-26.2	18.0
523.4	18049.8	-6.6	-28.2	16.0
500.0	19217.9	-9.6	-30.0	17.0
400.0	24754.5	-21.8	-40.7	16.0

STATION ALTITUDE 3997.30 FEET MSL
18 MAY 84
ASCENSION NO. 54

UPPER AIR DATA
1790060054
S M R

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LONG DEG

TABLE 18

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
3997.3	879.8	29.8	5.8	22.0	1007.7	679.4	0	0	1.000263
4000.0	879.7	29.8	5.8	22.0	1007.6	679.4	278.9	0	1.000263
4500.0	864.7	26.7	2.4	20.8	1001.4	675.7	278.9	4.9	1.000254
5000.0	849.8	24.2	-2	20.0	993.0	672.7	278.9	9.8	1.000247
5500.0	835.1	22.8	-8	20.7	980.3	671.1	278.9	14.7	1.000243
6000.0	820.5	21.5	-1.5	21.4	967.8	669.5	275.9	7.1	1.000240
6500.0	806.2	20.1	-2.1	22.2	955.4	667.9	281.3	3.4	1.000236
7000.0	791.9	18.6	-2.3	24.1	943.2	666.3	293.6	5.1	1.000233
7500.0	777.9	17.1	-2.6	25.9	931.3	664.6	295.3	10.0	1.000230
8000.0	764.1	15.6	-2.9	27.7	919.5	662.8	302.3	12.5	1.000227
8500.0	750.5	14.1	-3.4	29.5	907.9	661.1	303.7	13.7	1.000224
9000.0	737.2	12.6	-3.8	31.6	896.5	659.4	302.8	14.1	1.000221
9500.0	723.8	11.1	-3.7	33.3	885.0	657.6	301.9	14.4	1.000219
10000.0	710.7	9.5	-3.8	36.9	873.8	655.8	301.1	14.7	1.000217
10500.0	697.8	8.1	-5.0	39.2	862.4	654.1	301.4	13.3	1.000212
11000.0	685.1	7.0	-9.0	31.0	850.5	652.6	301.8	11.9	1.000204
11500.0	672.5	5.4	-7.5	38.7	839.3	650.9	299.7	11.2	1.000204
12000.0	660.0	4.1	-3.9	56.0	827.3	649.5	293.5	12.1	1.000207
12500.0	647.8	2.7	-8.5	43.5	816.6	647.6	288.1	13.1	1.000198
13000.0	635.7	1.4	-11.0	39.0	805.4	646.0	282.1	14.5	1.000193
13500.0	623.8	0.2	-10.5	44.4	793.5	644.7	276.3	16.3	1.000191
14000.0	612.0	-0.7	-14.2	33.1	781.6	643.5	271.7	18.3	1.000185
14500.0	600.5	-2.0	-14.7	37.0	770.4	641.9	274.7	19.6	1.000182
15000.0	589.1	-3.3	-14.5	41.6	759.6	640.3	278.7	20.9	1.000181
15500.0	577.8	-4.3	-19.4	29.5	748.1	639.0	284.2	22.3	1.000173
16000.0	566.8	-5.3	-26.3	17.3	736.8	637.7	291.5	26.0	1.000168
16500.0	555.9	-5.6	-26.6	17.1	723.4	637.4	297.6	25.1	1.000165
17000.0	545.2	-5.8	-26.4	17.7	710.1	637.1	302.8	23.8	1.000162
17500.0	534.7	-6.2	-27.3	16.9	697.4	636.7	308.4	22.6	1.000159
18000.0	524.4	-6.6	-28.1	16.1	685.0	636.2	312.9	20.9	1.000156
18500.0	514.3	-7.6	-28.9	16.4	674.8	634.8	318.1	19.3	1.000153
19000.0	504.3	-9.0	-29.7	16.8	664.9	633.2	321.9	18.5	1.000151
19500.0	494.3	-10.2	-30.6	16.9	654.7	631.8	321.9	18.5	1.000148
20000.0	484.5	-11.3	-31.5	16.9	644.4	630.5	322.0	18.6	1.000146
20500.0	474.8	-12.4	-31.5	16.8	634.2	629.1	321.7	18.4	1.000143
21000.0	465.3	-13.5	-33.5	16.7	624.2	627.8	320.6	17.7	1.000141
21500.0	456.1	-14.9	-34.4	16.6	614.4	626.5	319.4	17.0	1.000139
22000.0	447.0	-15.7	-35.4	16.5	604.7	625.1			1.000136
22500.0	438.0	-16.8	-36.4	16.4	595.2	623.8			1.000134
23000.0	429.3	-17.9	-37.3	16.3	585.9	622.4			1.000132

STATION ALTITUDE 3997.30 FEET PSL
 16 MAY 84
 ASCENSION NO. 54

1413 MDT

UPPER AIR DATA
 1790060054
 S M R

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

TABLE 18 Con't

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	DEGREES(TN)	DIRECTION DEGREES(TN)	SPEED KNOTS	
23500.0	420.7	-19.0	-38.3	16.2	576.7	621.1				1.000130
24000.0	412.4	-20.1	-39.3	16.1	567.7	619.7				1.000128
24500.0	404.1	-21.2	-40.2	16.0	558.9	618.4				1.000126

STATION ALTITUDE 3997.70 FEET MSL
18 MAY 84 1413 MDT
ASCENSION NO. 54

MANDATORY LEVELS
1790060054
S M R

GEODETIC COORDINATES
32.66034 LAT DEG
106.42307 LON DEG

TABLE 19

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE		DIRECTION DEGREES (TN)	SPEED KNOTS
850.0	4991.	24.2	-2.2	20.	278.9	9.7
800.0	6714.	19.5	-2.2	23.	290.5	2.3
750.0	8516.	14.1	-3.4	30.	303.7	13.8
700.0	10406.	8.2	-3.9	42.	301.3	13.5
650.0	12396.	2.9	-5.1	44.	289.1	12.9
600.0	14504.	-2.0	-14.7	37.	274.8	19.6
550.0	16753.	-5.7	-26.2	18.	300.3	24.4
500.0	19191.	-9.6	-30.0	17.	321.9	18.5
450.0	21831.	-15.4	-35.1	17.	318.5	16.5
400.0	24713.	-21.8	-40.7	16.		

STATION ALTITUDE 4003.62 FEET MSL
18 MAY 84 1413 MDT
ASCENSION NO. 2

SIGNIFICANT LEVEL DATA
1390200006
DON

GEODETIC COORDINATES
32.57209 LAT DEG
106.29439 LON DEG

TABLE 20

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
878.4	4003.7	28.0	8.8	30.0
871.8	4222.6	26.7	5.1	25.0
850.0	4952.4	24.1	2.9	25.0
722.0	9530.0	10.8	-1.3	63.0
710.7	9981.4	9.5	.1	52.0
700.0	10374.3	8.1	-2.5	47.0
679.8	11166.0	5.8	-1.3	60.0
669.0	11596.3	4.6	-3.9	54.0
646.7	12500.6	1.8	-2.1	75.0
638.5	12839.2	1.9	-9.3	43.0
636.1	12939.3	2.9	-12.5	31.0
630.5	13174.2	1.9	-12.3	34.0
600.7	14450.6	-1.2	-16.9	29.0
565.5	16026.1	-3.6	-23.8	19.0
514.3	18461.2	-10.1	-27.7	22.0
500.0	19174.6	-11.1	-29.6	20.0
483.0	20046.8	-11.9	-30.8	19.0
454.8	21554.7	-14.2	-32.7	19.0
402.3	24573.5	-21.4	-39.8	17.0

STATION ALTITUDE 4003.62 FEET MSL
18 MAY 84
ASCENSION NO. 5

UPPER AIR DATA
1790200006
DOW

TABLE 21

GEODETIC COORDINATES
32.57209 LAT DEG
106.29439 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF WIND KNOTS	DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
4003.7	876.4	28.0	30.0	1011.2	677.7	120.0	9.9	1.000273
4500.0	863.4	25.7	25.0	1002.8	674.7	127.5	8.0	1.000259
5000.0	848.6	24.0	25.2	991.6	672.6	139.4	6.4	1.000253
5500.0	833.6	22.5	27.2	978.9	671.0	158.1	5.1	1.000250
6000.0	818.8	21.1	29.1	966.3	669.3	183.5	4.7	1.000247
6500.0	804.4	19.0	31.1	954.0	667.7	208.7	5.3	1.000244
7000.0	790.2	18.4	33.1	941.8	666.0	223.5	6.1	1.000241
7500.0	776.2	16.7	35.0	929.9	664.3	234.0	7.1	1.000237
8000.0	762.5	15.2	37.0	918.1	662.6	241.8	8.4	1.000234
8500.0	749.0	13.8	38.9	906.5	660.9	250.4	9.6	1.000230
9000.0	735.8	12.3	40.9	895.1	659.2	257.0	11.0	1.000227
9500.0	722.8	10.9	42.9	883.9	657.5	262.1	12.4	1.000223
10000.0	709.7	9.4	51.5	872.3	655.9	267.0	13.7	1.000223
10500.0	696.8	7.7	49.1	861.7	653.8	271.0	15.1	1.000217
11000.0	684.0	6.3	57.3	850.1	652.2	272.9	16.7	1.000216
11500.0	671.4	4.9	55.3	839.0	650.5	273.1	18.6	1.000210
12000.0	659.0	3.3	63.4	827.9	648.7	273.0	20.5	1.000209
12500.0	646.7	1.8	75.0	816.9	647.0	271.5	22.7	1.000208
13000.0	634.6	2.6	31.8	800.5	647.4	270.2	24.9	1.000190
13500.0	622.8	1.1	32.7	790.0	645.6	271.8	25.1	1.000187
14000.0	611.1	-1.1	30.8	778.7	644.1	274.7	24.5	1.000183
14500.0	599.6	-1.3	28.7	767.5	642.7	277.7	24.0	1.000179
15000.0	588.2	-2.0	25.5	755.1	641.7	283.5	22.9	1.000175
15500.0	577.0	-2.8	22.3	743.0	640.8	290.7	21.8	1.000171
16000.0	566.1	-3.6	19.2	731.0	639.8	298.5	21.2	1.000168
16500.0	555.2	-4.9	19.6	720.5	638.3	304.1	21.7	1.000165
17000.0	544.4	-6.2	20.2	710.1	636.7	308.6	22.7	1.000162
17500.0	533.9	-7.5	20.8	699.9	635.1	312.6	23.7	1.000160
18000.0	523.6	-8.9	21.4	689.9	633.5	314.1	23.8	1.000157
18500.0	513.5	-10.2	21.9	679.9	631.9	315.5	23.9	1.000155
19000.0	503.5	-10.9	20.5	668.4	631.1	316.3	23.3	1.000152
19500.0	493.6	-11.4	19.6	656.7	630.4	316.5	22.2	1.000149
20000.0	483.9	-11.9	19.1	644.9	629.9	316.7	21.1	1.000146
20500.0	474.3	-12.6	19.0	634.0	629.0	316.0	19.9	1.000144
21000.0	465.0	-13.4	19.0	623.3	628.0	315.2	18.8	1.000141
21500.0	455.6	-14.1	19.0	612.8	627.1	315.5	17.9	1.000139
22000.0	446.6	-15.3	18.7	603.2	625.7	317.0	17.3	1.000136
22500.0	437.7	-16.5	18.4	593.8	624.3	318.5	16.7	1.000134
23000.0	428.9	-17.6	18.0	584.6	622.8			1.000132
23500.0	420.2	-18.6	17.7	575.5	621.3			1.000130

STATION ALTITUDE 4007.69 FEET "SL
 18 MAY 84 1413 MDT
 ASCENSION NO. 6

UPPER AIR DATA
 1790200006
 DON
 TABLE 21 Con't

GEODETIC COORDINATES
 32.57209 LAT DEG
 106.29439 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
24000.0	411.8	-20.0	17.4	566.6	619.9			1.000127
24500.0	403.5	-21.2	17.0	557.9	618.4			1.000125

STATION ALTITUDE 4003.69 FEET MSL
 16 MAY 84
 ASCENSION NO. 6

MANDATORY LEVELS

1390200006
 00W

TABLE 22

GEODETIC COORDINATES
 32.57209 LAT DEG
 106.29439 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS	
850.0	4949.	24.1	2.9	25.	137.9	6.5	
800.0	6672.	19.2	2.0	32.	214.8	5.6	
750.0	8474.	13.9	.1	39.	250.1	9.5	
700.0	10364.	8.1	-2.5	47.	270.0	14.7	
650.0	12352.	2.2	-2.3	72.	271.9	22.1	
600.0	14464.	-1.2	-17.0	29.	277.6	24.0	
550.0	16724.	-5.5	-24.9	20.	306.3	22.1	
500.0	19148.	-11.1	-29.6	20.	316.4	22.9	
450.0	21786.	-14.8	-33.3	19.	316.4	17.5	

STATION ALTITUDE 3905.0 FEET MSL
13 MAY 64
ASCENSION NO. 046

SIGNIFICANT LEVEL DATA

179000286
WHITE SANDS

GEODETIC COORDINATES
52.40243 LAT DEG
106.37033 LON DEG

TABLE 23

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT
	AIR DEGREES	DEWPOINT CENTIGRADE	
278.6	29.8	6.5	23.0
261.7	27.6	5.8	25.0
250.0	24.4	4.2	27.0
223.2	17.1	1.5	35.0
200.0	8.9	-4.4	52.0
174.3	5.7	-1.0	62.0
159.2	4.2	-3.8	56.0
130.8	0	-6.6	57.0
113.0	-1.0	-12.3	42.0
96.3	-2.9	-23.2	14.0
81.4	-9.5	-28.2	20.0
60.0	-10.7	-27.4	21.0
41.3	-11.9	-29.2	20.0
278.0	-12.1	-20.2	20.0
254.1	-14.3	-20.9	19.0
230.0	-22.3	-32.8	14.0
218.6	-28.5	-40.0	18.0
200.0		-44.0	21.0

UPPER AIR DATA
179007056
WHITE SANDS

STATION ALTITUDE 3909.70 FEET
18 MAY 84 1512 MDT
ASCENSION NO. 10

GEODETIC COORDINATES
32.40743 LAT DEG
106.57033 LON DEG

TABLE 24

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES C	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (TN) SPEED KNOTS	INDEX OF REFRACTION
3909.0	876.5	22.5	6.5	23.0	1004.1	679.5	290.0	1.000244
4000.0	876.3	22.5	6.4	23.0	1005.0	679.4	289.0	1.000244
4500.0	843.3	27.6	5.8	25.0	994.0	677.0	286.6	1.000241
5000.0	848.5	24.3	4.2	27.1	990.2	673.1	283.1	1.000256
5500.0	815.7	22.9	3.6	28.6	977.4	671.3	279.5	1.000252
6000.0	819.1	21.5	3.3	30.1	964.9	670.0	275.7	1.000249
6500.0	804.8	20.2	2.8	31.6	957.4	668.4	271.9	1.000245
7000.0	790.7	19.6	2.3	33.1	947.2	666.8	268.0	1.000242
7500.0	776.9	17.5	1.7	34.6	928.2	665.3	264.1	1.000236
8000.0	763.1	16.5	1.4	37.2	914.2	663.6	264.2	1.000235
8500.0	749.4	14.5	1.2	40.3	904.5	661.9	265.1	1.000232
9000.0	736.0	13.0	.9	43.4	892.9	660.2	265.9	1.000229
9500.0	722.8	11.5	.5	46.5	881.5	658.4	269.7	1.000226
10000.0	709.8	10.0	.0	49.6	870.3	656.7	274.5	1.000223
10500.0	697.0	8.5	-.4	53.1	859.2	654.9	279.0	1.000220
11000.0	684.3	7.0	-.7	56.1	848.3	653.1	278.7	1.000217
11500.0	671.7	5.5	-1.4	61.0	837.3	651.3	278.3	1.000215
12000.0	659.3	4.3	-3.5	54.4	825.6	649.8	275.2	1.000207
12500.0	647.1	3.9	-4.9	56.4	814.6	648.0	272.8	1.000203
13000.0	635.0	1.4	-6.4	56.8	803.8	646.3	273.2	1.000198
13500.0	623.1	.1	-8.9	56.6	792.9	644.6	273.5	1.000192
14000.0	611.4	-1.1	-12.8	40.6	781.9	643.0	277.9	1.000186
14500.0	599.8	-1.5	-15.9	30.8	769.6	641.9	262.4	1.000180
15000.0	588.4	-2.7	-22.0	7.0	757.6	640.8	287.2	1.000174
15500.0	577.1	-3.7	-23.9	15.1	745.9	639.6	292.1	1.000171
16000.0	566.0	-4.8	-24.6	15.3	734.4	638.4	296.7	1.000166
16500.0	555.1	-5.8	-25.4	15.4	723.1	637.1	299.7	1.000165
17000.0	544.4	-6.9	-26.4	15.6	711.9	635.9	301.8	1.000162
17500.0	534.0	-7.9	-27.0	15.8	701.0	634.6	303.4	1.000160
18000.0	523.7	-9.0	-27.8	15.9	690.2	633.4	306.4	1.000157
18500.0	513.5	-9.5	-27.8	25.6	677.9	632.9	307.2	1.000154
19000.0	503.5	-10.4	-28.6	26.4	665.7	631.9	311.8	1.000152
19500.0	493.7	-11.6	-30.0	20.0	652.2	630.2	313.5	1.000149
20000.0	484.0	-12.0	-30.6	15.5	645.4	629.7	315.4	1.000146
20500.0	474.4	-12.4	-31.2	15.0	637.7	629.2	316.7	1.000144
21000.0	465.1	-13.2	-31.9	15.0	629.2	628.1	316.7	1.000141
21500.0	455.9	-14.1	-32.5	15.0	620.4	627.1	316.9	1.000139
22000.0	446.7	-15.3	-33.7	15.9	607.4	625.6	318.6	1.000136
22500.0	437.7	-16.5	-34.9	15.7	594.2	624.1	318.6	1.000134
23000.0	428.9	-17.9	-35.1	15.5	585.2	622.5	320.5	1.000132

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STATION ALTITUDE (0.0.0) FEET -SL
13 MAY 84 1512 MDT
ASCENSION NO. 225

UPPER AIR DATA
1790020236
WMTT SANDS

TABLE 24 Con't

GLOMETRIC ALTITUDE MSL FEET	PRESSURE	TEMPERATURE		REL HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	WINDPOINT CENTIGRADE			KNOTS	KNOTS	DIRECTION DEGREES(TN)	SPEED KNOTS	
23500.0	420.2	-19.2	-77.2	18.4	576.3	670.9	14.9	721.4	14.9	1.000170
24000.0	411.0	-20.3	-73.4	18.2	567.6	619.3	15.6	721.1	15.6	1.000128
24500.0	403.5	-21.3	-74.5	18.1	559.0	617.8	16.3	720.7	16.3	1.000176
25000.0	395.2	-23.0	-70.5	18.3	550.3	616.2	16.4	718.4	16.4	1.000124
25500.0	387.0	-24.2	-71.2	18.9	541.5	614.7	16.2	715.2	16.2	1.000122
26000.0	379.0	-25.4	-71.9	19.5	532.9	613.2				1.000120
26500.0	371.2	-26.6	-72.7	20.1	524.4	611.7				1.000118
27000.0	363.5	-27.6	-73.5	20.6	514.1	610.2				1.000116

STATION ALTITUDE 1000 FEET
 15 MAY 84 1512 MDT
 ASCENSION NO. 1512

MANDATORY LEVELS
 1700020286
 WHITE SANDS

TABLE 25

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	WET POINT CENTIGRADE	PERCENT	DIRECTION DEGREES (TN)	SPEED KNOTS	
850.0	4044.	24.4	4.2	27.	283.5	9.5	
800.0	6672.	19.7	2.6	32.	270.6	9.1	
750.0	8479.	14.6	1.2	40.	265.1	9.1	
700.0	10774.	8.9	-0.4	52.	278.0	9.9	
650.0	12567.	3.2	-4.4	56.	273.2	18.5	
600.0	14475.	-1.2	-16.8	31.	282.2	19.3	
550.0	16727.	-6.3	-25.8	20.	300.7	22.9	
500.0	19151.	-10.7	-29.2	20.	312.4	23.9	
450.0	21700.	-14.0	-33.7	19.	316.7	16.8	
400.0	24672.	-17.7	-40.0	18.	320.2	16.5	

END

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